

**UNIVERSITY OF GONDAR
COLLEGE OF MEDICINE AND HEALTH SCIENCE
INSTITUTE OF PUBLIC HEALTH**

**A THESIS PROPOSAL SUBMITTED TO THE INSTITUTE OF PUBLIC HEALTH,
GONDAR COLLEGE OF MEDICINE AND HEALTH SCIENCES, UNIVERSITY
OF GONDAR IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR
THE DEGREE OF MASTER OF PUBLIC HEALTH IN HEALTH INFORMATICS**

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Full title of the project	Assessment of utilization and associated factors of health management information system in public health facilities of Jimma Zone, Oromia Regional State South West Ethiopia.
Duration of project	February 2011-June 2012
Study area	Jimma Zone, Oromia Regional State, South West Ethiopia
Total cost of the project	18,686 birr
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ACRONYM

ANC – Antinatalcare

Bsc –Bachelor of Science

ESHE - Essential Services for Health in Ethiopia

ETB –Ethiopian Birr

FP-Family Planning

HC –Health Center

HIS-Health Information System

HMIS-Health Management Information System

HW –Health Worker

IS – Information System

NPW-Non Pregnant Women

PRISM –Performance of Routine Information System

RHB-Regional Health Bureau

RHIS-Routine Health Information System

TB-Tuberculosis

UHMIS-Utilization of Health Management Information System

UNDP-United Nation Development Program

WHO –World Health Organization

WoHO-Woreda Health Office

SUMMARY

Introduction: HMIS is an organized system of record keeping, reporting, processing analysis, use and feed back of information which is designed to provide different level of beneficiaries with timely and relevant information necessary to formulate policy, plan, implement, monitor, supervise and evaluate health programmers”.

Countries with most limited resources need to make assessment to identify critical priority in planning. This is because planning is very much dependent on the quality, quantity, reliability and timely available information (data).

Information quality and use remain weak within the health sector, particularly at the peripheral levels of woreda and facility. Most of the data are collected at lower level of health institution but no more decision is taken at this level.

Objective: To assess utilization and associated factors of health management information system in Jimma zone health institution.

Methods: The study is health facility based cross sectional design quantitative study supplemented with qualitative study to assess the utilization of Health management Information system and associated factors at Jimma zone health institutions. Coded variable will enter in to EPI Info version 3.5.1 and transported in to SPSS version 16-window software program for analysis. This assessment will be conducted in 10-woreda health office and 16 health center health workers, which are selected using cluster sampling methods from health institution, which start HMIS. For qualitative study, data will be analyzed using thematic content analysis. Qualitative data will be entered and analyzed through thematic content analysis and will be done for verifying the health workers responses to explore utilization of HMIS.

Work plan and budget: The project will start in February 2011 and end in June 2012. The total budget required for the project is Birr 18,686.

1. INTRODUCTION

1.1. Statement of the problem

“ HMIS is an organized system of record keeping, reporting, processing analysis, use and feed back of information which is designed to provide different level of beneficiaries (clients, community, service providers, managers, planners and policy makers) with timely and relevant information necessary to formulate policy, plan, implement, monitor, supervise and evaluate health programmers”(1,2).

Routine health information systems (RHIS) attempt to produce timely and quality information about what is happening in health sector organizations. Ideally, this information is used to guide day-to-day operations, track performance, learn from past results, and improve accountability. However, the systems designed to track health data often fall short of this ideal data quality may be low, processes for using data other than sending reports may not exist, or managers and staff may have limited understanding of the importance of the information and few incentives to give attention to the management of information system processes(3).

Despite the credible use of HMIS for evidence based decision making (strategic planning, improved patient care, and efficient allocation of scarce resources and effective targeting of intervention to those in greatest need leading for better outcome). Countries with the highest burden of ill health and the most acute needs for good data have the weakest HMIS in the vast majority world's poorest countries. Countries with most limited resources need to make assessment to identify critical priority in planning. This is because planning is very much dependent on the quality, quantity, reliability and timely available information (4,5).

Research conducted in Uganda revealed that there is lack of reliable health information, which is one of the major obstacles to the effective planning of health services in Uganda. HMIS is aimed at being utilized at the Health Units where data is collected, in monitoring and evaluation of their activities before being channeled to the District Health Office for compilation, and use. This is still lacking (6).

In Ethiopia Information quality and use remain weak within the health sector, particularly at the peripheral levels of woreda and facility, which have primary responsibility for operational management under the woreda decentralization process begun in 2002 GC(7).

Global infectious threats, scrutiny of progress towards the millennium development Goals, and performance-based release of donor funding have all contributed to this increased awareness of the need for evidence. The WHO has also emphasized that; the lack of improved HMIS to support effective management is the major obstacle in the achievement of health for all in the year 2000(8).

Ethiopia is one of the least developed countries and its HMIS is by no means different from the feature of other developing countries. Ethiopia is also in the phase of decentralization and democratization and great managerial responsibility are to be assigned to the health managers at different levels (4). In Ethiopia, there is lack of using information for decision making in health sector at the higher level and lower level where the data is collected. This leads to low utilization of health management information system for decision purpose.

1.2 Literature review

The importance of strengthening the routine health management information systems (HMIS) has been well recognized by international organizations (Such as WHO, UNDP), aid agencies and national governments as one approach to support the public health reform initiatives of developing countries. More specifically, the Alma-Ata declaration of 1978 set out a new approach leading to the development of health information systems most commonly seen in many developing countries today(9,10).

The World Health Organization (WHO) argues that investment in health management information systems now could reap multiple benefits, including: helping decision makers to detect and control emerging and endemic health problems. Monitor progress towards health goals, promote equity; empowering individuals and communities with timely and understandable health-related information, and drive improvements in quality of services (11, 12).

The data needed in a comprehensive health management information system ranges from birth, morbidity and mortality data, to type and location of health personnel, to type and quality of clinical services provided at national and sub-national level and finally to population indicators, such as demographics and socio-economic status. In terms of data use, countries have been consistently poor at supporting health workers who are collecting data to use it locally for planning and management purposes. Some observers speculate that facilitating greater local use of data could improve data quality overall, as those doing the data collection should be more motivated (13).

HMIS is one of the most important tools needed for the prevention and control of diseases because it gives information critical for planning, monitoring and evaluation of services. Today the success of any organisation is dependent on the effective use of information. Changing the procedures by which information is gathered, processed and used for decision-making implies altering the way in which an organisation operates (14, 15).

The output of the Health management information system is measured by two criteria. They are: a) levels of data quality and b) use of information.

1.2.1 Data Quality

Data quality is measured on dimensions of data accuracy and completeness at the facility level while at district level is measured by timeliness, data accuracy and completeness (16).

Data Accuracy

Data accuracy was observed by counting numbers in the registers and matching it with what was reported in the monthly report. The data accuracy at the district level could be checked by counting selected data elements in the submitted paper reports and comparing it with what is available in the computer database.

Completeness

The completeness of the monthly report is measured by how many data elements were filled against those total data elements that the facility was supposed to fill.

Timeliness

Another dimension of data quality is timeliness. Timeliness is measured by the district receiving facilities' reports by the deadline set forth by the districts(17).

1.2.2 Use of Information

The use of information was assessed using two criteria. First, the availability of any kind of report (feedback, quarterly, health services etc.) and reviewing them for use of information. Second, by observing records of facility meetings on discussion of utilization of HMIS findings and decisions made based on those discussions.

1.2.3 Factors associated with utilization of health management information system

There are many factors contributing to the successful utilization of a health management information system. Some of the factors are:-

1. Objectives

At an organizational or institutional level determining the core objectives in terms of health services, provision and information capabilities are important requirements for utilization of HMIS.

2. Planning and strategy

Planning and strategizing is an important way to map out possible directions that the information system will be used for on the short and longer term. During planning and strategy always, make explicit strategies to support the informational management approach and put support strategies in place (18).

3. Stakeholders roles and responsibilities

The stakeholders are the human part of the organization and many times pursue different objectives, concerns, priorities and constraints. Stakeholders are all the people or organizations that will be affected by the system and who have a direct or indirect influence on the system requirements (18).

4. Social and cultural aspects

Social issues to consider are personal agendas, changes in status and power and other political issues. Political issues, for example, tend to be isolated systems that operate independently throughout the organization like the conflict between the inherent values of clinicians and administrators (18).

5. Technology

Technology as a factor, which consists of the hardware and software. Information and telecommunications infrastructures. Focus on simplicity, integration and standardization, user friendliness and sustainability (18).

6. Human capacity development

Systems professionals, services providers and leaders with high skill levels and experience in an organization are important components of success. Training is also an important part of capacity development. HMIS data collection, processing and information use assumes a certain level of general education and specialist training amongst health workers, which is often not available, especially in smaller health units in developing countries. Too few HMIS training for health unit personnel to

grasp new skills, such as data processing, compiling graphs and statistics will then lead to unsuccessful skills and a lack of the right capacity (18).

1.2.4 Functionality of HMIS Processes

HMIS processes are essential for an information system to run smoothly in order to Produce quality data and facilitate the use of information. The HMIS processes include: data collection, data quality check, data transmission, data processing, data analysis, data display, feedback and promotion of use of information (19).

Supervision Quality

Supervision is very important for providing support to staff and it is a means for on job training.

Availability of Resources

The availability of resources to perform HMIS tasks is crucial (19). According to study conducted in Guanajuato HMIS data accuracy was above 95% for ANC and diabetes. Completeness for filling the monthly report was 22% and timeliness of report was 62.7% for both. From those facilities, 41% discussed and made decision using HMIS information. While 27% of the facilities decisions were referred to higher level for action. Out of surveyed facilities 85 percentage have computer, printer and calculator while 40% have regular telephone and internet (20).

Guanajuato HMIS process from studied facilities reported having data collection procedure manual 51%, mechanism of checking data quality 40%, and mechanism for checking data completeness 40.1%, 48.8% showed all criteria for data transmission process, perform data analysis 60.4% but with less emphasis on comparison among type of services, 75% data are displayed, 57.8% showed documentation of feedback and 47.6% supervised in last 3 months (20).

In Mauritius use and dissemination of information was 57% and data management is the weakest component of the Mauritian HIS scoring only 10% (6).

Observation in Ghana and Uganda suggest that more than 10% and 20% of the information needed in a register is over used to improve management in any meaningful way respectively (8).

The level of accuracy in Uganda and Pakistan was 79% and 41% respectively. The level of information use in Uganda and Pakistan was 41% and 10% respectively (8). In South Africa information use level was 65%. On average 83%, 76% and 83% of respondents strongly believe the department promotes checking data quality problem solving and use of information respectively. The data accuracy in South Africa was only 43%.

The Essential Services for Health in Ethiopia (ESHE) Project was an integrated program of child survival interventions and health sector reform designed to improve family health. Funded by the United States Agency for International Development (USAID), ESHE collaborated with health offices at all levels to reduce child deaths and strengthen the health system. The report on Health Management Information System (HMIS) by ESHE, Ethiopia suggested that the Woreda level is especially important, since it provides first line managerial support to the facilities. To provide Woreda level managers with usable information, all facilities reporting to the Woreda should use the same system (21).

An assessment of the existing paper-based HIS conducted by the regional health bureau in collaboration with ESHE (Essential Services for Health in Ethiopia) project in 2004 showed that health data collection, reporting and analysis in the region is highly fragmented, top-down, inconsistent, and poor quality and redundant data being reported to higher levels(9).

According to study conducted by Weldemariam Hirpha in Ethiopia 80% of health facilities had immunization-tracking charts while staffing pattern displayed is 55%. Timeliness and completeness of reports range from 86% to 100% and 89% and 96% respectively. Only 50% and 60% of health facility had required registers and forms respectively and 15% have standard HMIS guideline (14).

1.3 Justification

- The HMIS in developing countries lags seriously behind as compared to the developed countries; and the existing HMIS in many developing countries is insufficient to support health management functions including Ethiopia.
- The public health care system in Ethiopia is characterized by differences across regions and between districts and zones within districts in terms of
 - existing HISs (paper-based and DHIS)
 - uneven infrastructure development (such as access to computers, internet connectivity availability of telephone & electricity)
 - differences in geographic size (large and small)
 - differences in human capacity and competency (both from the IS and health domains) and
 - Varied organizational and managerial commitment and support.

Assessing the utilization of health management information system of Jimma zone health center is useful because according to the new HMIS each health facility in the woreda plan, process, analyze and use information of health center and health post under their catchment area for action and quarterly report to the woreda health office. But this is not performed now and all health center are not implementing HMIS this makes to difficult to collect the same data using different format and make decision at woreda and higher level based on information collected from each health facility together. As my knowledge concern there is no research conducted in the study area about UHMIS in those health centers implements HMIS. Therefore, this study tries to identify the utilization of HMIS in those health centers implement HMIS and associated factors affecting HMIS and useful for researcher, planners and policy makers.

2. OBJECTIVE

2.1 General objective

To assess utilization and associated factors of health management information system in public health facilities of Jimma Zone, Oromia Regional State South West Ethiopia.

2.2 Specific objective

- To examine utilization of the generated information for health management functions (planning, monitoring, and evaluation) or use of information for action.
- To identify factors associated with utilization of HMIS

3. METHODS

3.1 Study design

The study will be health facility based cross sectional design quantitative study supplemented with qualitative study to assess the utilization of Health management Information system and associated factors at Jimma zone health institutions.

3.2 Study area and period

This study will be conducted in Jimma zone, which is one of the 18 zones in the Oromia National Regional State and Jimma is the capital town of the zone which is located 355 Km southwest of Addis Ababa. In the zone, there are four hospitals, 18 woreda health offices, 62 health centers, and 512 health posts. The health coverage of Jimma zone is 87% with total population of 2,757,329. This assessment will conduct in 10-woreda health office and 16 health center units/departments in those selected woreda, which implement HMIS. The study period is from February 2012 to June 2012.

3.3 Source population

All Health Centers and Woreda Health Offices implement HMIS in Jimma zone.

3.4 Study population

All health workers in government health centers and Woreda Health Offices implement HMIS in Jimma Zone (health post are excluded from the study because they are not implement HMIS and Hospital are one which are not representative and administered by RHB). For qualitative study health center and woreda health office head are included in the study.

3.5 Inclusion and exclusion criteria

3.5.1 Inclusion criteria

All available health personnel and HMIS unit/department head working in Jimma zone, woreda health office and health centers.

3.5.2 Exclusion criteria

Health personnel who are sick or took annual leave at the time of data collection and working in woreda health office and health center.

3.6 Variable of the study

3.6.1 Dependent variable

Utilization of health management information system

3.6.2 Independent Variable

Socio-demographic characteristics, Quality of data (timeliness of reporting, accuracy of data and completeness of data), Characteristic of organizational units/departments, Selection and preparation of appropriate indicators and Supervision and feedback.

3.7 Operational definitions

Accuracy In terms of data quality: The match of data transmitted from one level to another in the HMIS, e.g. from client records at facility to the monthly RHIS summary report to the district.

Completeness In terms of data quality: Degree to which HMIS data covers all geographical areas, services and facilities and is filled out in full on data collection forms.

Culture of information Organization has the capacity and control to promote values and beliefs among organizational members for the collection, analysis, and use of information to accomplish organizational goals and mission.

Data quality Degree to which HMIS data is consistent, timely, complete, and relevant

Evidence-based decision-making a management approach based on using reliable quantitative information to guide decisions about targeting resources efficiently.

Health information system; System that provides specific information support to the decision making process at each level of an organization.

Health system; System of all actors, institutions, and resources that undertakes “health actions” – i.e. actions whose primary purpose is to promote, restore, or maintain health (WHO).

Health information - is health care data that have been organized in to a meaningful format, aggregate information about all patients and related activates important for patients /clients and for overall services.

Indicator Defined, measurable data indicating progress toward objectives.

Information Data that have been processed and interpreted so that they have meaning and can be used for decision-making.

MIS: a system that provides specific information support to decision-making process at each level of an organization (WHO, 2000). Management information systems are distinct from other information systems in that they are used to analyze operational activities in the organization.

Resource Input needed to perform a task, such as funds, personnel, infrastructure, or materials.

Timeliness In terms of data quality: Degree to which HMIS data is up-to-date and available when needed, and submitted on time according to established deadlines.

Using information for decision making- planning, budget allocation, monitoring and Evaluation of programs to take immediate action.

Utilization of health information system- 1= using information for decision making to take immediate action, 2 = feedback from respective supervisors, 3= calculation of area coverage and preparation of Maps, 4= presence of key indicators with charts or tables (indicators were not expected to be same that is it varies from one units to the other unit) and 5= presentation of achievements of targets at the last health center and woreda health office. So that units /departments were considered as utilizing health information system when they are, practicing at list three of them out of the five criteria listed above.

3.8 Sample size and sampling procedures

3.8.1 Sample size

The sample size is calculated using single proportion formula by taking the study level of confidence to be 95%, margin of error 5%. P = 22.5% assumed that the proportion of utilization of information at woreda health office and health facilities level (taken from study).

Sample size is calculated by the formula.

$$n = \frac{Z^2 \cdot P \cdot (1-P)}{d^2}$$

Where n = the minimum sample size required.

d = marginal error.

Z = the standard normal variable.

= is 1.96 with 95% confidence Interval (CI)

P = estimated proportion, it is taken as 22.5% utilization of information (taken from study).

$$n = \frac{(1.96)^2 \times 0.225 (1 - 0.225)}{(0.05)^2}$$

$$n = 268$$

Design effect 2 final sample size = 2x268 =536

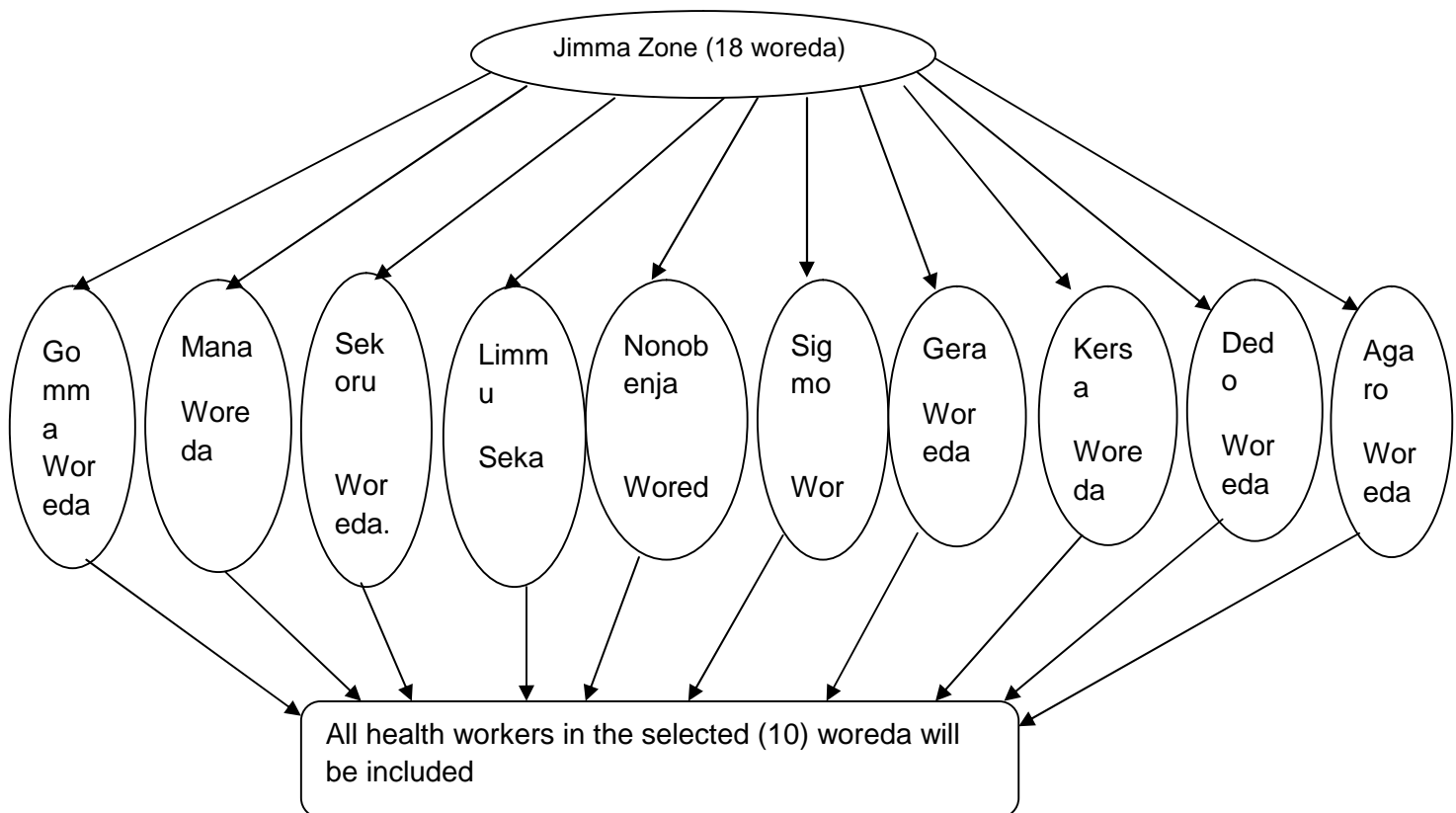
$$n_f = \frac{536}{1 + \frac{536}{1166}} = \underline{\underline{367}}$$

Based on these assumptions, the total calculated sample size 367 health workers from all health centers and woreda health offices. For qualitative study woreda health office and health center heads are included. Sample size determined based on saturation of ideas/concepts forwarded from the key informants on daily basis.

3.8.2 Sampling procedures

For quantitative study all health workers in health center and woreda health office implemented HMIS found in Jimma Zone will be included in the study. From the total 18-woreda health office in Jimma Zone 10 woreda are selected using cluster sampling method and all health workers in the selected health office and health center are included as final study subject. Finally, 367 health workers will make up the whole sample.

Cluster sampling procedure



For qualitative study, In order to triangulate the findings obtained from unit/department on factors associated with utilization of HMIS, in-depth interview will be conducted for health center and woreda health office heads. Purposive sampling technique will be used to select the key informants and the size of the participants for the interview determined based on redundant information and saturation of ideas/concepts forwarded from the key informants on daily basis.

3.9 Data collection procedures

3.9.1 Data collection instruments

Face to face interview will be conducted using structured questionnaire and observational checklist in the study units and departments to identify how data and information is generated like observation of registration books, monthly, quarterly and annual reports, and graph, charts and Maps in the health center and Woreda health office. For Health System Management: The data for the generation of information for system management can be collected (obtained) from the health unit reports and from the staff assigned at the system level. Data collection employed various methods including observation, questionnaire and key informant personal in-depth interviews.

We will also compare recorded monthly figures from aggregated district reports and electronic database (obtained at the provincial level) for selected health service. Six Bsc health professionals collect the data and two supervisor's one from health office and one from health center supervise the data collectors. In order to evaluate the clarity of the questionnaire, validity of the instrument and reactions of the respondents to the questionnaire a pre-test will be conducted on 10% of the study population, in an area different from the study area. The questionnaire prepared in English language is translated into native local language Afaan Oromo to make it easy to understand and to administer for interviewer and interviewee.

The qualitative method will be conducted using in-depth interview. In-depth interview questions will be asked to explore about UHMIS. Participants for qualitative study are head of woreda health office and health center.

3.9.2 Data quality assurance

Check all data for completeness, accuracy and consistency by the supervisors and principal investigator every day. Anything, which is unclear and ambiguous, will be corrected by data collectors on the next day. On daily bases 10% of collected samples will be rechecked by the supervisor's weather, the interviews have done their job properly or not. For qualitative part note taken during in depth interview will be organized by investigator each day.

3.10 Data management and analysis

Data will be entered, cleaned and analyzed using EPI info version 3.5.1(for data entry) and SPSS version 16(for analysis) statistical packages. Descriptive analysis for utilization rate of information by sex, age, and years of services, Supervision, feedback, and determinate factors will be analyzed. Odds ratio and confidence interval will be calculated to show the association between the utilization of information and exposure variables. Logistic regression analysis will be done to avoid the confounding effect of the exposure variables such as sex, educational status, Training, supervision, year of services, salary and some other factors one over the other. For qualitative study, data will be analyzed using thematic content analysis. Qualitative data will be entered and analyzed through Open Code and will be done for verifying the health professional responses on the factors that associated with utilization of HMIS.

4. ETHICAL CONSIDERATIONS

Ethical clearance will be obtained from the institute of Public Health University of Gondar. Official letters will be submitted to the Jimma zone health office and woreda health office then Jimma zone health office will send to health center.

The purposes and the importance of the study will be explained & informed consent will be secured from each participant. Confidentiality will be maintained at all levels of the Study by not writing their name on questioners and use data for the purpose of this study only. Participant's involvement in the study will be on voluntary basis; participants who are unwilling to participate in the study & those who wish to quit their participation at any stage will be informed to do so without any restriction and obtain any benefit of the research finding.

5. DISSEMINATION AND UTILIZATION OF RESULTS

The results of the study will be presented to the school of public health as part of MPH thesis. The result will be published on Ethiopian journal of health development and I will present to those who are in need of these result and accordingly will advocate for those who can implement it, example to health center, woreda health office, zonal health office and Oromia regional health bureau.

A table showing a work plan to assess utilization and associated factors of health management information system in public health facilities of Jimma Zone, Oromia Regional State South West Ethiopia.

sr. no	Activity	Responsible person	Feb.	Mar	Apr	May	June
1	Development of the research proposal	Investigator					
2	Securing ethical clearance	Investigator					
3	Securing budget	Funding agency					
4	Ethical clearance from respective authorities	Investigator					
5	Recruitment and training of data collectors and supervisor	Investigator					
6	Pre-testing questionnaire	Investi.,sup er.and data collector facilitators					
7	Data collection	Investi.,sup er.and data collector facilitators					
8	Data coding, entry and cleaning	Investigator					
9	Data analysis	Investigator					
11	Thesis write up & submission of first draft	Investigator					
12	Second draft submission	Investigator					
13	Defense	Investigator					
14	Final report submission	Investigator					

Budget Breakdown for Undertaking a Post Graduate Research on assessment of utilization and associated factors of health management information system in public health facilities of Jimma Zone, Oromia Regional State South West Ethiopia.

Principal investigator: Seife Redahegn (Bsc)

Advisors; Professor Yigzaw Kebede (MD, MPH) and Walelegn Worku (Bsc, MPH)

Budget Category						
Part I: Personnel costs						
S .No	Title	Qualificati on	Unit costs	No of days	Total/ETB/	Activity
1	Principal Investigator	1BSc	70	20 days	1400	For pre test, training and data collection
2	Data collector facilitators	5Bsc	70	20 days	7000	For pre test, training and data collection
3	Supervisors	1BSc	70	20 days	1400	For pre test, training and data collection
	Sub total				9800	

Part II. Equipment & supplies						
S .No	Title	Qualification	Unit costs	Quantity	Total/ETB/	Activity
	Duplicating paper	Printing paper(pack)	120	1	120	
	Pen	Bic	3	9	27	
	Pencil	Dot pencil	1	9	9	
	Note pad	Sinner line	12	9	108	
	Binding of the document		10	6	60	
	Duplicating the Questionnaire	Copy	.50X	6x436x.5	1308	
	Printing the final proposal report	Print	3X	61	183	
	Printing the thesis report	Print	3X	83	249	
	Sub total				2064	

Part III. Transportation						
S. N O	Transport	Unit cost/ETB/	Number of trip	Total /ETB/	Justification	
1	From Jimma to Mana	8	8X9X2	144	For data collection, Supervision and bus	
2	From Jimma to Sekoru	28	28X9X2	504	>>	
3	From Jimma to Limmuseka	78	78X9X2	1404	>>	

4	From Limmuseka to Nonobenja	65	65X9X2	1170	>>	
5	From Agaro to Gera	35	35X9X2	630	>>	
6	From Jimma to Gomma	15	15X9X2	270	>>	
7	From Jimma to Sigo	95	95X9X2	1710	>>	
8	From Jimma Kersa	10	10X9X2	180	>>	
9	From Jimma Agaro	15	15X9X2	270	>>	
10	From Jimma Dedo	30	30X9X2	540	>>	
	Sub total			7362		

Budget summery

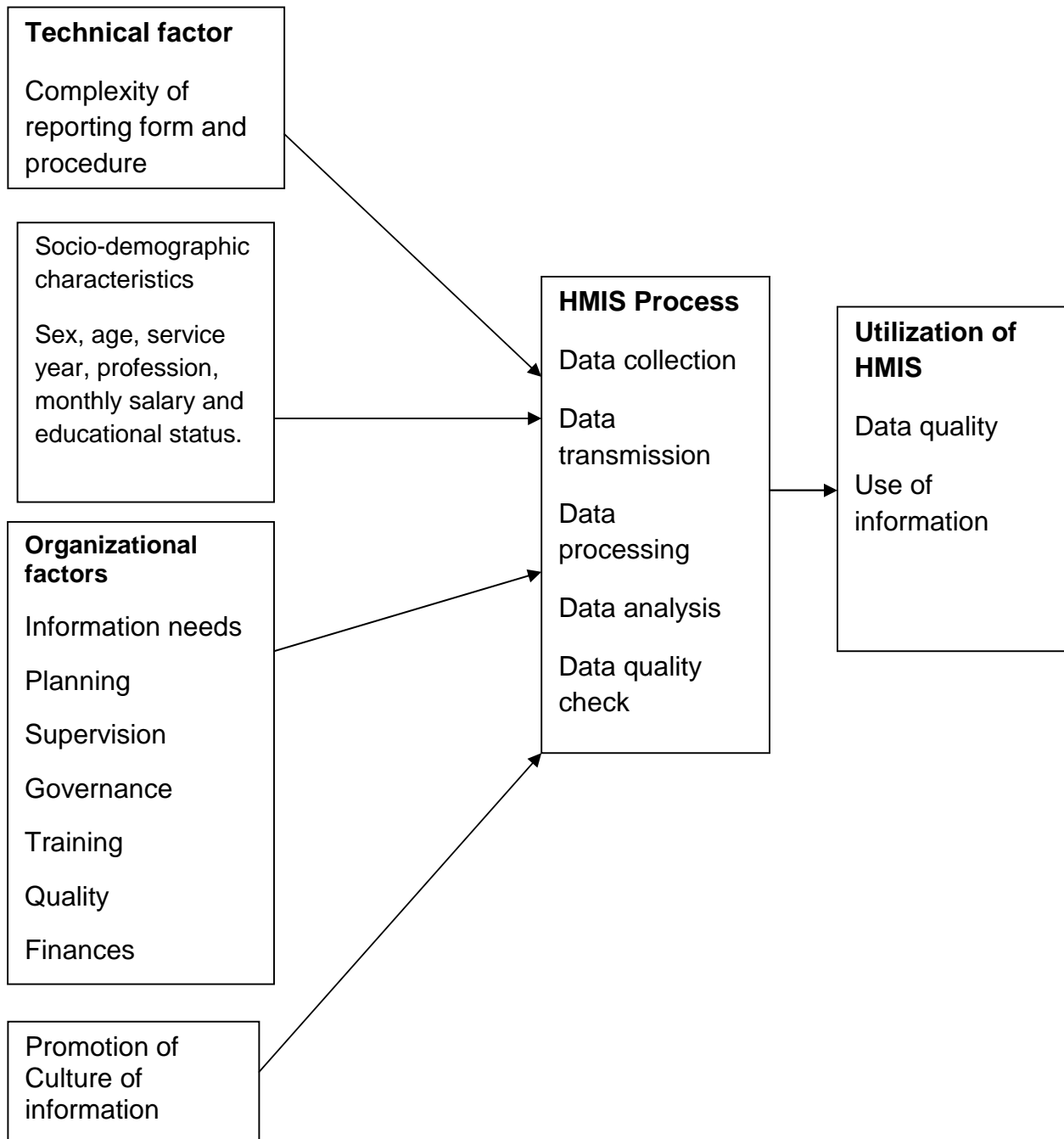
Category	Cost in ETB	
Personal costs	9800	
Stationary costs	2064	
Transportation	6822	
Grand total	18,686	

6. REFERENCE

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ANNEX ONE: CONCEPTUAL FRAME WORK



ANNEX TWO: DUMMY TABLES

Distribution of respondents by woreda health office and health center

		Respondents Distribution		Total
		WoHO	HC	
profession	Health officer			
	Nurse			
	Env'tal H.			
	Mid wife			
	lab.tech.			
	Health education			
	Data manager/stat. Clerk			
	Total			

Convenience of registration and reporting formats

			Simple and complete	Difficult to manage	Total
profession	Health officer				
	Nurse				
	Env'tal H.				
	Mid wife				
	lab.tech.				
	Health education				
	Data manager/stat. Clerk				
	Total				

Responsible person to record daily activity by job category

		I my self	Other health professional	Trained persons or clerk	Total
profession	Health officer	Number			
		%			
	Nurse	Number			
		%			
	Env'tal H.	Number			
		%			
	Mid wife	Number			
		%			
	lab.tech.	Number			
		%			
	Data manager/stat. Clerk	Number			
		%			
	Total				

ANNEX THREE: CONSENT FORM

Consent form

Dear health care workers (participants)

The aim of this study is to assess utilization and associated factors of HMIS in Jimma Zone, Oromia Regional State South West Ethiopia, 2011/12. And you are chosen to participate in this study by chance. The study will involve various questions about use and quality of HMIS and associated factors. In order to effectively attain the objective of the research, we are requesting your help. There is no need to put your name on the questionnaire; no individual response will be reported. Your responses will be completely confidential. It is your full right to refuse in responding any question or all of the questions. However, your honest answers to these questions will help us in better understanding the utilization and associated factors of HMIS, so; we are requesting you to give your honest responses and keep participation. It will take a maximum of 20 minutes to answer these questions.

Would you willing to participate please?

If you are pleasurable to participate in the study, I will start the questions.

ANNEX FOUR: STRUCTURED QUESTIONNAIRES FOR UTILIZATION OF HMIS FOR QUANTITATIVE STUDY

Part 1

	Information use assessment at facility level			
	Name of the district:..... Name of facility:..... Name of Unit/department:.....	Name of the Assessor:..... Date of Assessment:.....		
	Socio-demographic characteristics			
01	Sex	1.male 0.famale		
02	Age			
03	Service year	0.1-3 1.4-6 2. >6		
04	Monthly salary	0.1233-2249 1.2250-3400 3.>3400		
05	Profession	0.Health officer 5.Midwife 1. Nurse 6.Health Education 2.Env'tal health 7.IT 3.Pharmacist 4.Labratory		
06	Educational status	0.Diploma 2.degree 3.Masters		
	Data Recording			
07	Who is responsible person to record daily activities	1.servic e provide r	0.other person	
08	Do you have enough registers and forms in this unit/department?	1. Yes	0. No	
09	Do the records kept have any use to you?	1. Yes	0. No	

10	Do you have the knowledge on data collection tools (Questionnaire)?	1. Yes	0. No	
11	Who compiles the recorded data in the unit/department?	1.my self	2.other health worker	3.n on professional
12	What is your opinion about the convenience of recording on the current formats in use?	1. Easy to handle	2. Difficult to understand	3. Time taking
13	Do you think you have enough capacity to collect reliable data and generate the required information?	1. Yes	0. No	
14	Do you aggregate daily services tallies?	1. Yes	0. No	
15	Do you keep copies of the HMIS monthly reports, which are sent to the district health office?	1.Yes	0.No	
16	Do you have data collection standards including case definitions?	1.Yes	0.No	Evidence required

17	Did you receive a directive in the last three months from the senior management:			
A	Check the accuracy of data at least once in three months?	1.Yes, Observed	0. No	
B	Fill the monthly report form completely	1.Yes, Observed	0. No	
C	Submit the report by the specified deadline	1.Yes	0. No	

Data Transmission /Data Processing/Analysis				
18	Do data processing procedures or a tally sheet exist?	1. Yes, Observed	0. No	
19	Do you produce the following?			
A	Calculate indicators facility catchment area	1. Yes, Observed	0. No	
B	Comparisons with district or national targets	1. Yes, Observed	0. No	
C	Comparisons the recorded and reported	1. Yes, Observed	0. No	
D	Comparisons of data over time (monitoring over time)	1. Yes, Observed	0. No	
20	Do you have data transmission, processing, and reporting rules?	1. Yes, Observed	0. No	
21	Does a procedure manual for data collection (with definitions) exist?	1. Yes, Observed	0. No	
22	Do you have HMIS disease classification?	1. Yes,	0. No	
23	How timely do you send your reports?	1. Timely	2.Sometimes delayed	3.usually delayed

		Display of information	
24	Do you display a plan by dividing the annual plan in to quarter?	1.Yes	0.No
Use of Information			
HMIS report production			
25	Do you compile HMIS Data?	1.Yes	0.No

26	Do you calculate area coverage for essential services and prepare Maps?	1.Yes	0.No
27	During the last three month, did you receive any feedback report from district on your performance?	1.Yes	0. No

28	Is feedback, quarterly, yearly or any other report on HMIS data available, which provides guidelines/ recommendations for actions?	1.Yes	0.No	
	Discussion and decisions about use of information	1.Yes	0.No	
29	Do you Utilize health Information system at the institutional level	1.Yes	0.No	
30	Do you use your data to prepare your plan of action ?	1.Yes	0.No	
31	Do you have key indicators with charts, tables?	1.Yes	0.No	
32	Is the unit/department having HIS multi disciplinary committee for overall design and direction users of information?	1.Yes	0.No	If no go to question no 35
33	If yes, evidence based see these criteria's circle the applicable	1.Yes	0.No	
	1= using information for decision making such as planning, budget allocation, and monitoring and evaluation of programs to take immediate action, 2 = feedback from respective supervisors 3= calculation of area coverage and preparation of Maps, 4= presence of key indicators with charts or tables, 5= presentation of achievements of targets at the health center and Woreda team			

34	Have you ever trained about HMIS?	1.Yes	0.No	
35	Is training given to you is sufficient?	1.Yes	0.No	
36	Do you have objective to utilize the information?	1. Yes	0. No	
37	Do you have plan and strategy to use information for action?	1. Yes	0. No	
38	The social and culture of the institution allow you to utilize HMIS?	1. Yes	0. No	
39	Do you change the data in to information every month?	1.Yes	0.No	if yes evidence required
40	Do you have any mechanism of checking data quality and completeness?	1.Yes	0.No	if yes evidence required
41	Do you have any resource needed for UHMIS?	1.compute r	2.print er	3.calcula tor
42	Do you have operational HMIS computer?	1.Yes	0.No	if yes observe

Supervision by the district/zonal health office			
43	How many times did the district/zone supervisor visit your unit/department during the last three months? (check the answer)	0.no 1.1 times 2.2 times 3.times 4. >3 times	
44	Did you observe a supervisor having a checklist to assess the data quality?	1.Yes	0.No
45	Did the supervisor check the data quality?	1.Yes	0.No
46	Did the district supervisor discuss utilization of HMIS when he/she visited your facility?	1.Yes	0.No
47	Did the supervisor send a report/feedback/note on the last two supervisory visits?	1.Yes	0.No

Part 2

Information use assessment for District				
Name of the district.....			Date of Assessment:.....	
Name of unit/department:.....				
Name of the Assessor:.....				
Socio-demographic characteristics				
01	Sex	1.male 0.famale		
02	Age			
03	Service year	0.1-3 1.4-6 2. >6		
04	Monthly salary	0.1233-2249 1.2250-3400 3.>3400		
05	Profession	0.Health officer 5.Midwife 1. Nurse 6.Health Education 2.Env'tal health 7.IT 3.Pharmacist 4.Labratory		
06	Educational status	0.Diploma 2.degree 3.Masters		
Data Recording				
07	Do you have enough forms to compile data?	1. Yes	0. No	
08	Do the records kept have any use to you?	1. Yes	0. No	
09	Who compiles and records the data in the unit/department?	1.my self	2.other health worker	3.non professional
10	What is your opinion about the convenience of recording on the current formats in use	1. Easy to handle	2. Difficult to understand	3. Time taking

11	Do you think you have enough capacity to compile reliable data and generate the required information?	1. Yes	0. No	
12	Do you keep copies of the HMIS monthly reports, which are sent to the Zonal health office?	1. Yes	0. No	
13	Do you have data collection standards including case definitions?	1. Yes	0. No	Evidence required

14	During the last three months, did you receive a directive from the senior management that there will be consequences for not adhering to the following directives:			
	A if you do not check the accuracy of data	1. Yes, Observed	0. No	
	B If you do not fill in the monthly reporting form completely	1. Yes, Observed	0. No	
	C If you do not submit the monthly report by the specified Deadline	1. Yes, Observed	0. No	
Data Transmission /Data Processing/Analysis				
15	Do you have data transmission, processing, and reporting rules?	1. Yes, Observed	0. No	
16	Do you calculate area coverage for essential services and prepare maps?	1. Yes, Observed	0. No	
17	Do you ever assist health facilities in completing the Forms correctly?	1. Yes, Observed	0. No	

18	Do you Compare data over time (monitoring over time)	1. Yes, Observed	0. No	
19	Do you have HMIS disease classification?	1. Yes,	0. No	
20	Is there definite time for report submission and receiving?	1. Yes,	0. No	
21	If yes mention the day?			

	Display of information				
22	Do you have key indicators with charts, tables?	1.Yes	0.No		
23	Do you display a summary of demographic information such as population by target group(s)?	1.Yes	0.No		
Use of Information					
HMIS report production					
24	Do you compile HMIS Data?	1.Yes	0.No		
25	During the last three month, did you receive any feedback report from zonal office your performance?	1.Yes	0. No		

26	Is feedback, quarterly, yearly or any other report on HMIS data available, which provides guidelines/ recommendations for actions?	1.Ye s	0.No	
	Discussion and decisions about use of information	1.Ye s	0.No	
27	Do you Utilize health Information system at the district level ?	1.Ye s	0.No	If no go to question no 29

28	If yes, evidence based see these criteria's circle the applicable			
	1= using information for decision making such as planning, budget allocation, and monitoring and evaluation of programs to take immediate action, 2 = feedback from respective supervisors 3= calculation of area coverage and preparation of Maps, 4= presence of key indicators with charts or tables, 5= presentation of achievements of targets at the last health center and Woreda team minutes			
29	Have you ever trained about HIS/HMIS?	1.Ye s	0.No	
30	Is training given to you is sufficient?	1.Ye s	0.No	
31	Do you compare facility performance against plan target? (Ask to see to confirm analysis /report)	1. Yes	0. No	
32	Do you have plan and strategy to use information for action?	1. Yes	0. No	
33	The social and culture of the institution allow you to utilize HMIS?	1. Yes	0. No	
34	Do you change the data in to information every month?	1. Yes	0.No	if yes evidence required
35	Do you have any mechanism of checking data quality and completeness?	1.Ye s	0.No	if yes evidence
36	Do you have any resource needed for UHMIS?	1.co mput er	2.pri nter	3.calculat or

37	Is there HMIS multidisciplinary committee for all design and direction users of information?	1.Yes s	0.No	if yes evidence
38	Do you have operational HMIS computer?	1.Yes s	0.No	if yes observe
39	Is the unit/department has a Health information steering committee to set the long-term goals for HIS and needs to decide which key indicators should be measured and which data are necessary?	1.Yes s	0.No	if yes observe
40	Do you perform performance audits of health facilities?	1.Yes s	0.No	if yes observe
Supervision by the district/zonal health office				
41	How many times did you supervise health facility during the last three months? (check the answer)	0.no 1.1 times 2.2 times 3.3 times 4. >3 times		
42	Did you have supervisor checklist while you assess the data quality?	1.Yes	0.No	
43	Do you send a report/feedback/note on your the last two supervisory visits?	1.Yes	0.No	

Foormii heeyyama

Kabajamoo (hojjetoota fayyaa) hirmaattotaa

Kaayyoon qu'annaa kana to'annaa haala oodefannoo fayyaa fi wantoota issaan wal qabatan Godina Jimma, naannoo Oromia, kibba dhiiha Etiyoophiiaatti, 2011/12. Kan issiin qu'annoo kanaaf filatamtan carraadhaani. Qu'annoon kun gaafii waa'ee itti fayyadamaa fi quulqullina to'annaa oodefannoo fayyaa fi wantoota to'annaa oodefannoo fayyaattin walqabatan illaalata. Qu'annaa kana galmaan gahuuf yaadni keessaan murteessaadha. deebiin keessaan iccitiidhaan qabama maqaan keessaan hin barreefamu. Gaaffii barbaadan deebiisuu baachuuf miirga guutuu qabdan. yaadni keessaan murteessaa waan ta'eef haama dhumaatti yaada ammanamaa akka nuuf keenitaan. Gaafii kana tumuruuf immoo naannoo daqiiqaa 20 nu jalaa fudhachuu danada'aa.

Kanaafu ammaa jalqabuu dandeenya.

Yoo feedha keessaan ta'ee ammaa nan jalqaba.

Kutaa 1

	Buufata fayyaa irratti quulqullina daataa sakata'u			
	Maqaa wajjiraa:..... Maqaa Buufata fayyaa:..... Maqaa nama raggaa sassaabu:.....	Guyyaa raggaan itti sassabame:.....		
	Odefannoo hawaasumaa			
01	Saala	1.dhiira 0.dhalaa		
02	Umrii			
03	Bara tajaajilaa	0.0 1.1 2.2 3.3 4.3 Oli		
04	Mindaa ji'aa	0.1233-2249 1.2250-3400 3.>3400		
05	Ogumaa	0.Qondaala fayyaa 5.Deessistuu 1. Narsii 6.Barsiisaa Fayyaa 2.To.atta fayyaa naannoo 7.IT 3.faarmaasii 4.Laabraatoorii		
06	Sadarkaa barumsaa	0.Diiploomaa 1.Diigrii 2.Maastaarsii		
	Daataa galmeesu			
07	Eenyutu hojii guyyaa guyyaa galmeesa	1.nama hojatee	0.nama birra	
08	Galmees fi foormii gahaa qabdaa?	1. eeyye	0. lakkii	
09	Wantii galma'ee bu'aa qabaa jettee yaadaa?	1. eeyye	0. lakkii	

10	Beekumsaa haalaa daataa itti sassaaban gahaa qabdaa?	1. eeyye	0. lakkii	
11	Kutaa kanatti eenyuutu daataa galmeesse gurmeesa?	1.ana	2.oogess a birraa	3.nama ooguma an ala ta'ee
12	Ilaalchi kee haala foormii haaraa kanarrati galmeesu maal fakkaata?	1. salphaad ha	2. Hubachu uf rakkisaad ha	3. yeroofu dhata
13	Attii daataa kana sassaabu fi Odefannoo barbaachisuu qopheesuuf gahuumsan qabaa jette yaadaa?	1. eeyye	0. lakkii	
14	Hojii guyyaa guyyaa taalii ni gootaa?	1. eeyye	0. lakkii	
15	Ragaa “HMIS”ji’aan gabaastu kooppii issaa ni haanbifattaa?	1. eeyye	0. lakkii	
16	Daataa sassaabuuf waalta’aa qabdaa hiikaa keezii dabaltee?	1. eeyye	0. lakkii	Haa ilaalmu

17	Ji’oota sadan darbaan keessatti deegarsa qama oolanaarra argatanii?			
A daataan sirrii ta’uu issaa		1. eeyye	0. lakkii	
B gabaasni ji’aa guutuu ta’uu issaa		1. eeyye	0. lakkii	
C Gabaasni yeroon gabaafamu issaa		1. eeyye	0. lakkii	
adeemsa daataa itti jijjiramu				
18	wantii daataan itti jijjiramu ykn taalii shiitiin jiraa?	1. eeyye,ilaalaa	0. lakkii	
19	Kan armaan gadii ni raawwataa?			

A	Agarsiistuu nii shallagdu	1. eeyye,ilaalaa	0. lakkii	
B	Aanaa ykn biyyooleessa wajjiin wal ni maddaalchistu	1. eeyye,ilaalaa	0. lakkii	
C	kan gabaafamee fi kan galmeefamee waal ni maddaalchistu	1. eeyye,ilaalaa	0. lakkii	
D	Gabaasa yeroo yeroodhaan ni maddaalchistu	1. eeyye,ilaalaa	0. lakkii	
20	Haalaa daataan dabarfamuu,jijjiramu fi gabaafamu seerii jiraa?	1. eeyye,ilaalaa	0. lakkii	
21	maanuuwaliin guulantaa adeemsa daataa sassaabu ni jiraa?	1. eeyye,ilaalaa	0. lakkii	
22	Haalaa dhukkubni “HMIS” itti qoqqodamuu qabduu?	1. eeyyeen	0. lakkii	
23	Hammaam gabbaasa keessaan yeroodhaan gabaastan?	1.yeroodhaan	2. yeroo tokko tokkoo duubetti haanbiisna	3 yeroo hundaa duubetti haanbiisna

		Odefannoo mul’isuu		
24	Kutaa/diipartimeentiin kun karoora waggaa kurmaana kurmaana ni mul’isuu/maxxansuu?	1.eeyyeen	0.lakkii	
Itti fayyaadama Odefannoo				
Gabbaasa “HMIS”				
25	Daataa HMIS walitti ni qabdaa?	1.eeyyeen	0.lakkii	

26	Hojii murteeso ni herregdaa?	1.eeyyeen	0.lakkii
27	Ji'ootan darbaan sadden keessatti qaamaa ol'aanaa irraa dub-deebii argataniirtuu?	1.eeyyeen	0.lakkii

28	dub-deebii waggaa ykn kuurmaana waa muurteesuuf ni fayyadaa?	1.eeyyeen	0.lakkii	
	maree fi murteesumaa Odefannoo			
29	Odeefannoo fayyaa Sadarkaa buufata fayyaatti ni fayyaadamtaa?	1.eeyyeen	0.lakkii	
30	Daataa kee hojiirra oolchuuf ni fayyaadamtaa?	1.eeyyeen	0.lakkii	
31	Agarsiistuu chaartiidhaan/gabaattedhaan qabdaa?	1.eeyyeen	0.lakkii	
32	Haala itti fayyaadama odeefannoo irratti Kutaan/diipartimeentiin kun koree qabaa?	1.eeyyeen	0.lakkii	
33	Eeyyeen yoo ta'ee, kan armaan gaddii keessaa irra maraa	1.eeyyeen	0.lakkii	
	1= oodefannoo murtoodhaaf fayyadamu fkn karoorsuuf,bajata hiruuf,sagantaa hoordoofuf,murtoo attatamaa fuudhachuuf 2 = duub-deebii suparvaayizarii irraa 3= gahee ofii heerreeguuf,maappii qoopheesuf 4= agarsiistuun chaartii fi gabateedhaan jira			
34	waa'ee "HMIS" irratti leenjii fudhataniirtu?	1.eeyyeen	0.lakkii	
35	Leenjiin kun gahaadhaa?	1.eeyyeen	0.lakkii	

36	Odefannootti fayyaadamuuf kayyoo qabdaa?	1.eeyyeen	0.lakkii	
37	Odeefannoo kan fayyadamuuf karoora qabdaa?	1.eeyyeen	0.lakkii	
38	haala hawaasumaa fi aadaan odeefannoo akka itti fayyadamtaan ni godhaa?	1.eeyyeen	0.lakkii	
39	Daataa gara odefannootti ni jijjiirtaa?	1.eeyyeen	0.lakkii	Haa ilaal amu
40	Kutaan/diipartimeentiin kun haala daataan sirrii fi guutuu ta'uu issaa itti mirkaneesu qabaa?	1.eeyyeen	0.lakkii	Haa ilaal amu
41	"HMIS"hojiirra oolchuuf qabeenya gahaan jiraa?	1.kompiwu utwra	2.priintarii	3.ka alkul eeta rii
42	Kumpiwutara hojeetu qabduu?	1.eeyyeen	0.lakkii	Haa ilaal amu

Supeerviizsinii aanaadhaan ykn godinaan godhame			
43	Aannaan ykn godinii yeroo meeqa suuperviziniigaggeesan?	0.hin geggeessine 1. 1 2.2 3.3 4. >3	
44	Supeerviizsinii yoo gaggeesan cheekilistii ni qabatuu?	1.eeyyeen	0.lakkii

45	supervayizariin waa'ee qulqullumaa daataa ni ilaaluu?	1.eeyyeen	0.lakkii
46	supervayizariin yoo issiin birra dhufanittii fayyaadama "HMIS" issiin wajjiin ni marri'attu?	1.eeyyeen	0.lakkii
47	supervayizariin gabbaasa/dub-deebii marsaa lammaan darbanitti eerganiiru?	1.eeyyeen	0.lakkii

Kutaa 2

Wajjira eegumsa fayyaa Aanaa irratti quulqullina daataa sakata'u				
Maqaa wajjiraa:..... Maqaa nama raggaa sassaabu:..... Maqaa Kutaa:.....		Guyyaa raggaan itti sassabame:.....		
Odefannoo hawaasumaa				
01	saala	1.dhiira 0.dhalaa		
02	umrii			
03	Bara tajaajilaa	0.0 1.1 2.2 3.3 4.3 Oli		
04	Mindaa ji'aa	0.Qondaala fayyaa 5.Deessistuu 1. Narsii 6.Barsiisaa Fayyaa 2.To.atta fayyaa naannoo 7.IT 3.faarmaasii 4.Laabraatoorii		
05	ogumaa			
06	Sadarkaa barumsaa	0.Diiplooma 1.Diigrii 2.Maasteersii		
Daataa galmeesu				
07	Galmees fi foormii gahaa qabdaa?	1.eeyyeen	0.lakkii	
08	Wantii galma'ee bu'aa qabaa jettee yaadaa?	1.eeyyeen	0.lakkii	
09	Kutaa kanatti eenyuutu daataa galmeesse gurmeesa ?	1.ana	2.oogessa birraa	3.nama oogumaan ala ta'ee

10	Ilaalchi kee haala foormii haaraa kanarrati galmeesu maal fakkaata?	1. salphaadh a	2. Hubachu uf rakkisaad ha	3. yeroofud hata
11	Beekumsaa haalaa daataa itti sassaaban gahaa qabdaa?	1.eeyyeen	0.lakkii	
12	Ragaa “HMIS”ji’aan gabaassu kooppii issaa ni haanbifattaa?	1.eeyyeen	0.lakkii	
13	Daataa sassaabuuf waalta’aa qabdaa hiikaa keezii dabaltee?	1.eeyyeen	0.lakkii	Haa ilaalamu

14	Ji’oota sadan darbaan keessatti deegarsa qama oolanaarra argatanii?			
A	daataan sirrii ta’uu issaa	1.eeyyeen,il aalii	0.lakki i	
B	gabaasni ji’aa guutuu ta’uu issaa	1.eeyyeen,il aalii	0.lakki i	
C	Gabaasni yeroon gabaafamu issaa	1.eeyyeen,il aalii	0.lakki i	
adeemsa daataa itti jijjiramu				
15	Kutaa/diipartimeentiin haalaa daataan dabarfamuu,jijjiramu fi gabaafamu seerii jiraa?	1.eeyyeen ,ilaalii	0.lakkii	
16	Hojii ijoodhaaf gahee issaa ni herregdaa?	1.eeyyeen ,ilaalii	0.lakkii	
17	Buufata fayyaaf deegarsa haala foormii itti guutan ni himtaa?	1.eeyyeen ,ilaalii	0.lakkii	
18	daataa yeroodhaa yerootti waal ni maddaalchistu?	1.eeyyeen ,ilaalii	0.lakkii	

19	Haalaa dhukkubni “HMIS” itti qoqqodamuu qabduu?	1.eeyyeen	0.lakkii	
20	Guyyaa murta’aan gabbaasa itti gabaastan fi sassaabdan ni jiraa?	1.eeyyeen	0.lakkii	
21	Yoo jiiraatee guyyaan issaa yoomi?			

	Display of information				
22	Fuurtuu muurtawwaa chaartii, gabaatee qabdaa?	1.eeyyeen	0.lakkii		
23	Odefannoo haala hawaasumaa ibsu maxxansatte qabdaa?	1.eeyyeen	0.lakkii		
Use of Information					
HMIS report production					
24	daataa “HMIS” walitti ni qabdaa?	1.eeyyeen	0.lakkii		
25	Ji’oota saddan darbaan keessatti godinii dub-deebii gahuumsan irratti hunda’ee siif eergerra?	1.eeyyeen	0.lakkii		

26	Dub deebii waggaa,kurmaanaa ykn ji’aa murtoof qarqaaru qabdaa? maree fi murteesumaa Odefannoo	1.eeyyeen	0.lakkii	
		1.eeyyeen	0.lakkii	
27	Odeefannoo fayyaa Sadarkaa wajjira aannaatti ni fayyaadama?	1.eeyyeen	0.lakkii	
28	Eeyyeen yoo ta’ee, kan armaan gaddii keessaa irra maraa			
	1= oodefannoo murtoodhaaf fayyadamu fkn karoorsuuf,bajata hiruuf,sagantaa hoordoofuf,murtoo attatamaa fuudhachuuf 2 = duub-deebii suparvaayizarii irraa 3= gahee ofii heerreeguuf,maappii qoopheesuf 4= agarsiistuun chaartii fi gabateedhaan jira			

29	waa'ee "HMIS" leenjii argateertaa?	1.eeyyeen	0.lakkii	
30	Leenjiin siif keenamee gahaadha jettee yaadaa?	1.eeyyeen	0.lakkii	
31	Hojii buufattaalee karoora wajjiin wal ni maddaalchistu?	1.eeyyeen	0.lakkii	
32	karoora fi tarsiimoo haala Odefannoo itti fayyadamu ni qabdaa?	1.eeyyeen	0.lakkii	
33	haali hawaasumaa fi aadaan wajjirichaa odefannoo akka itti fayyadamtu si kakkaasaa?	1.eeyyeen	0.lakkii	
34	Daataa gara odefannootti ni jijjiirtaa?	1.eeyyeen	0.lakkii	Haa ilaalamu
35	Haala daataan sirrii fi guutuu ta'uu issaa itti mirkaneestu qabdaa?	1.eeyyeen	0.lakkii	Haa ilaalmu
36	"HMIS"hojiirra oolchuuf qabeenya gahaan jiraa?	1.kompiw uutwra	2.priint arii	3.kaalk uleetarii
37	koree "HMIS" haala Odefannoo itti fayyaadama to'atu jiraa?	1.eeyyeen	0.lakkii	Haa ilaalmu
38	Kumpiwutara hojeetu qabduu?	1.eeyyeen	0.lakkii	Haa ilaalmu
39	Koree odefannoo fayyaa kayyoo yeroo dheeraa fi murtoo agarsiistuu irratii murteessu jiraa?	1.eeyyeen	0.lakkii	Haa ilaalmu
40	Gahuumsa irra gessee oditti ni gootaa?	1.eeyyeen	0.lakkii	Haa ilaalmu

Supervision by the district/zonal health office				
41	Ji'oota saddan darbaniif yeroo meeqa buufattaalee fayyaa superwayizi gotanirtu?	0.hin goone		

		1.al 1 2. al 2 3.al 3 4. >3 oli	
42	yoo buufattaalee fayyaa to'atan cheekilistii ni qabattu?	1.eeyyeen	0.lakkii
43	Suppeerviizsinii keessaan kan dhumarra gotaniif dub-deebii eergitaniirtu?	1.eeyyeen	0.lakkii

ANNEX FIVE: INDEPTH INTERVIEW QUESTIONNAIRES FOR QUALITATIVE STUDY

Questionnaire for Key Informants (woreda health office or health center head)

- 1) What problems do you encounter in data processing (collection, analysis and Interpretation etc)?.....
.....
.....
- 2) Why these problems and what suggestions do you have to minimize?
.....
.....
- 3) How can we improve utilization of the HMIS process?
.....
.....
- 4) Is there any difficulty in compiling and using data for decision making at district level?.....
.....
- 5) Is there health center, which is not implementing HMIS? 1. Yes 0.No
- 6) If yes, is there any difference between those health center start HMIS and not start?.....
.....
- 7) What do u think about those health center not start HMIS?
.....
.....
- 8) The reporting system is according to HMIS guideline ? 1. Yes 0.No
- 9) If question no 9 is No. why?
.....
.....
- 10) Is there any discussion and decision about use of information?
If yes what kind of decision/action taken at facility level and transferred to higher level (for those difficulties)?.....

Gaaffilee itti gaafatamtootaaf qophaa’ee

1) Yoo daataa fuunaantan rakkoo maaltuu issiin muddate?

.....
.....

2) Rakkooleen kun maaliif issiin muddatee?rakkoolee kana hir’issuuf maaltuu goodhamuu qaba jettee yaada?

.....
.....

3) Itti fayyaadama “HMIS”akkamitti foyyeesu dandeenya?

.....
.....

4) Daataa gurruu akkasumas muurteedhaaf itti fayyadamuuf rakkoon jiruu maalii?

.....
.....

5) Buufatni fayyaa “HMIS” hin jalqabiin jiru? 1.eeyyeen 2.lakkii

6) Eeyyeen yoo ta’ee buufata fayyaa jalqabaniifi hin jalqabiin gidduutti garaagarumaan jira?.....

.....
.....

7) Waa’ee buufata fayyaa “HMIS “hin jalqabiin maal yaaduu?

.....
.....

8) Gabaasni akka “HMIS”tti gabaafamaa jiraa? 1.Eeyyeen 0.Lakkii

9) Gaaffiin lakkoofsa 8 eeyyeen yoo ta’ee.maaliif jeette yaada?

.....
.....

10) Waa’ee itti fayyadama odeefannoo marii fi muurtoon gaggeefamee jira?.....

.....

11) Comparing data for selected activities of the last three months.

Activity	Data available on tally sheets(1)	Data available on records(2)	Data available on computer(3)	Difference between 1 and 2	Difference Between 2 and 3	Information displayed 1.Table 2.Graph/Charts 3.Map
ANC						
DPT3						
PMTCT						
VCT						
TT2 NPW						
TT2 PW						
FP						
OPD						
TB						
Delivery service						

ANNEX SIX: INFORMATION SHEET TO GET PERMISSION FOR RESEARCH

Introduction

This information sheet is prepared to explain the research project that you are asked to join by a group of research investigators. The main aim of this research project is to assess utilization and associated factors of Jimma Zone health institutions.

Name of Principal Investigator: Seife Redahegn

Name of Advisors: Professor Yigzaw Kebede (MD, MPH) and Walelegn Worku (Bsc, MPH)

Name of the Sponsor: **University of Gondar**

Name of Organization: **University of Gondar, College of Medicine and Health Sciences, School of Public Health, Department of Health Informatics:**

This information sheet is prepared by above-mentioned researcher whose main aim is to assess utilization and associated factors of HMIS.

The investigator is a final year MPH student with advisors from institute of public health, College of medicine and health sciences, university of Gondar.

Purpose:

The purpose of this research study is to assess utilization and associated factors of HMIS in Jimma Zone, South West Ethiopia 2011/12.

Procedure:

This study uses institutional based quantitative cross-sectional study design supplemented with qualitative study. Permission will be processed from the University of Gondar and Jimma Zone health office.

Risk and/or Discomfort:

There is no any risk or discomfort that you will face by participating in this research except dedication of time for responding the questioner. Every piece of information will be kept confidentially. There is no any risk in participating in this research project.

Benefits:

There will be benefit for Oromia regional state, Jimma zone health office, woreda health office, health facilities and health workers participating in the research. Generally, it will help to identify factors influencing utilization of HMIS and how to use information for action at the level where data is collected.

Incentives/Payment for Participating:

There is no incentive or payment to be gained by taking part in this project.

Confidentiality:

Not all Personal identifiers & personal information will be taken. The information collected from this research project will be kept confidential. The researcher and research assistant only will access the information.

Persons to contact:

This research project will be reviewed and approved by the ethical committee of the University of Gondar. If you want to know more information, you can contact the committee through the address below. If you have any question you may contact the following individuals.

Investigator: Seife Redahegn e-mail sifantig@gmail.com, mobile 0911775810

Advisors: Professor Yigzaw Kebede (MD, MPH) and Walelegn Worku (Bsc, MPH)

HEEYYAMA QU'ANNAA KANAAF WARAQAA OODEFANNOO

Seensaa

Waraqaan odeefannoo kun kan qoophaa'ee namoota quu'annoo kanarrati hirmaattani gaafii gaafattootan gaafatamtaniifi. Kaayyoon quu'annaa kanaattiis itti fayyadamaa fi huudhaa “HMIS” wajjiraalee fi buufata fayyaa goodina jimmaa sakkata'u dha.

Maqaa qoorattaa: Saayifaa Raddaahany (Bsc)

Maqaa gorsiitootaa: pro.Yiigzaawu Kabadaa (MD, MPH) fi Waalaaliiny Woorqu (Bsc, MPH)

Maqaa dhaabatticha quu'annoo qarqaaru: **yuuniivaarsiitti Goondar**

Maqaa dhaabatticha: **yuuniivaarsiitti Gondar, kolleejii Meedisinii fi saayiinsii fayyaa, dhaabbata fayyaa hawaasaa, diipartimeentii “health informatics”:**

Qoorataan barataa maastarsii waggaa lamaaffaa, goorsitootni barsiisoota Yuuniivaarsiitti goondar.

Kayyoo

Kayyoon quu'annaa kanaa itti fayyadamaa fi huudhaa “HMIS” wajjiraalee fi buufata fayyaa goodina jimmaa sakkata'u goodina Jimmaa, kibba dhihaa Etiyophiyaa 2011/12.

Tartiibaa adeemsa hoojichaa

Quu'annoo kun kan itti fayyadamu “quantitative cross-sectional study design supplemented with qualitative study”. Heeyyamni kan fuudhatamuu Yuuniivaarsiitti Goondar fi wajjiira Eegumsa fayyaa goodina jimmaarraa.

Miidhama:

Quu'annaa kanarrati hirmaachuu keessaniin rakkoon issiin muddatuu tokkoolee hin jiru. Yeroo keessaan qoofa yoo issiin jalaa fuudhatee malee yaadni keessaan hundii iccitiidhaan qabama.

Faayyidaa:

Faayyidaan quu'annoo kanaas naannoo oromiyyaattif, goodina Jimmaa fi aannaaleedhaaf akkasumas buufattaalee fayyaaf.walumaagalattii waa'ee itti fayyadamaa fi huudhaa "HMIS" sakkata'a fi haala odefannoo murtoodhaaf itti fayyadaman huundaaf.

Kaffalttii hirmaataaf kafalamu:

Quu'annoo kanarrati hirmachuuf qarshiin keenamu hoomtu hin jiru.

Iccitti:

Odefannoo keessaan martii iccitiidhaan eegama kan oodefannoo keessaan ilaaluu qoorattaa fi deegartoota issaa qoofa.

Nama argachuu dandeessan

Quu'annaan kun kan ragaa'u koree Yuuniivaarsiitti goondarinni.yoo gaafii ykn odefannoo dabalataa barbaadan namoota maqaan issaanii armaan gaddiitti tara'ee gaafachuu dandeessan.

Qoorattaa: Saayifaa Raddaahany email sifantig@gmail.com

lakk.bilbiilaa 0911775810

**Gargaaraa (Gorsittota): pro.Yiigzaawu Kabadaa (MD, MPH) fi Waalaaliiny
Woorqu (Bsc, MPH)**

ANNEX: SEVEN ASSURANCE OF INVESTIGATOR

The undersigned agrees to accept responsibility for the scientific, ethical and reports as pre terms and condition of research and publication office of the University of Gondar.

Student Name: **Seife Redahegn (Bsc)** Signature..... Date.....

Approval of the advisors:

Advisors Name	Signature	Date
1. Professor Yigzaw Kebede (MD, MPH)
2. Mr.Walelegn Worku (Bsc, MPH)